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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,511	10/31/2003	Michel A. Riou	084061-0500	9611

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EXAMINER	
FIDLER, SHELBY LEE	
ART UNIT	**PAPER NUMBER**
2861	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,511	RIOU ET AL.	
	Examiner	Art Unit	
	Shelby Fidler	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 10/31/2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/31/2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Objections

Claim 33 is objected to because of the following informalities: Claim 33 reads as being dependent upon a nonexistent claim 40. During examination, claim 33 was treated as being dependent upon claim 30. Appropriate correction is required.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

The drawings are objected to because output tray 42 is missing, and reference numbers 42 (output tray) and 120 (vapor handling system) are missing. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 23, 25, and 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Anderson et. al. (6643220).

With regards to claim 23, Anderson teaches a condensate storage system comprising a receptacle (cartridge, col. 9, line 27) having an inlet (having pipe thru a boundary forms an inlet, col. 6, lines 48-52) and a condensate absorbing member within the receptacle (absorbent, col. 6, lines 52-53).

With regards to claim 25, Anderson teaches that the condensate absorbing material, by being replaceable, is configured for removal from the receptacle (col. 9, lines 44-56).

With regards to claim 26, Anderson teaches that the receptacle (cartridge), by being replaceable, is configured to be removably received (col. 9, lines 48-52).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 12-14, 18-19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg et. al. (6659587).

With regards to claims 1 and 24, Anderson discloses a printing system (print unit, col. 5, line 19) comprising of an ink dispenser (print carriage, col. 5, line 22), a condenser 405 configured to condense vapor into condensate (col. 6, line 27), a receptacle, or storage means, to collect condensate (cartridge, col. 9, lines 48-52), and a condensate absorbing member within the receptacle (col. 9, lines 52-54). Anderson does not teach a perforated receptacle. Berg teaches of a waste fluid collection receptacle (col. 2, lines 42-43) in which a perforated lid covers the container (col. 4, lines 13-15). At the time of invention, it would have been obvious to one of ordinary skill in the art to combine Anderson's printing system with Berg's perforated receptacle. The motivation for doing so, as taught by Berg, is so water may evaporate from the receptacle (col. 4, lines 13-15).

With regards to claim 2, Anderson teaches of a condenser that includes a conduit with a conduit interior (hollow tube) and a coolant source (cooling fluid) connected to the conduit (col. 6, line 29).

With further regards to claims 3 and 4, Anderson continues to teach that coolant source is configured to supply liquid coolant or gas coolant (cooling fluid, col.6, line 29-36).

With further regards to claim 12, Anderson teaches of a condensate-absorbing material within the receptacle (col. 6, line 52).

With further regards to claim 13, Anderson teaches that the condensate-absorbing material is removable from the receptacle (col. 9, lines 48-51).

With further regards to claim 14, Anderson teaches that the condensate-absorbing material is made of foam (spongy or other porous solid, col. 9, line 51).

With further regards to claim 18, Anderson teaches of an ink dispenser (print carriage) that includes an inkjet printhead (col. 5, lines 26-27).

With further regards to claim 19, Anderson teaches of a media handling system (media routing assembly 305) that transports sheets of material relative to the ink dispenser (col. 3, lines 21-25).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claims 1 and 2 above, and further in view of Rosenfeld (6025860). Anderson does not teach of a condenser including fins. Rosenfeld discloses a digital decorating system including a condenser with cooling fins 64 (col. 8, lines 36-38) which are thermally coupled to a conduit (col. 8, lines 39-44). At the time of invention, it would have been obvious to one of ordinary skill in the art to combine the fins of Rosenfeld with the system of Anderson. The motivation for doing so, as described by Kadle (4958681) is to enhance the heat transfer capacity of the condenser (heat exchanger, col. 4, lines 25-28).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claim 1 above, and further in view of Merrill (5771053). Anderson does not teach of a receptacle with an inlet or means for automatically occluding the inlet. Merrill discloses a receptacle (ink release assembly, col. 1, line 63) with an inlet (col. 6, line 9) and a means for automatically occluding the inlet (col. 2, lines 55-58). At the time of invention, it would have been obvious to one of ordinary skill in the art to combine Anderson's invention with Merrill's receptacle. The motivation for doing so, as taught by Miller (4919301), is that an automatically occluding inlet would stop the flow of fluid in the conduits (col. 13, lines 47-48).

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claim 2 above, and further in view of Sugikobo (6174055).

With regards to claim 7, Anderson does not teach of a coolant source comprising of a pump and cooling device. Sugikobo discloses a solvent vapor recovery system for ink jet printers using a coolant source (cooling liquid recirculating device) that includes a pump and cooling device (col. 9, lines 49-52). It would have been obvious at the time of invention to one of ordinary skill in the art to apply Sugikobo's coolant source to Anderson's printing system since the pump would move the cooling fluid (col. 9, line 51) and the cooling device would cool the coolant to a desired temperature (col. 9, lines 49-50).

With regards to claim 8, Sugikobo discloses that the coolant source includes a compressor (col. 10, lines 49-51). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Anderson's cooling source to include a compressor because it increases the temperature and pressure of the coolant (col. 10, lines 50-51).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claim 1 above, and further in view of Pagnon et. al. (6352324). Anderson does not teach of a condenser with a thermoelectric module. Pagnon discloses an ink circuit in which a condenser is used in combination with a thermoelectric module (Peltier effect cell, col. 3, 36-40) for condensing and recovering volatile ink components. It would have been obvious to one of ordinary skill in the art of heat transfer at the time of invention to incorporate Pagnon's Peltier effect thermoelectric module into the condenser of Anderson since a thermoelectric module is widely known to be an inexpensive cooling device.

Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claim 1 above, and further in view of Beauchamp et. al. (6536863).

With regards to claim 10, Anderson does not teach of blowers. Beauchamp discloses an inkjet printer mechanism that includes a blower 70 (col. 2, line 50). It would have been obvious at the time of invention to one of ordinary skill in the art to modify Anderson's invention to include Beauchamp's blower, because the blowers assist in removing moisture from the printed media to the condenser (col. 2, lines 51-53).

With regards to claim 22, Anderson does not teach of heaters. Beauchamp discloses a heater 40 for heating deposited ink (col. 2, lines 21-25). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Anderson's invention to include a

heater because it uses "conduction heating of wet media sheets to dry the sheets and thus remove substantially all of the moisture" (col. 2, lines 23-24).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg as applied to claim 1 above, further in view of Beauchamp as applied to claim 10 above, and further in view of Wang (5280709). Anderson teaches of a duct (passageway, col. 7 lines 22-23) guiding vapors to the condenser, requiring the duct to be proximate the condenser. Anderson does not teach of a condenser with an exhaust opening or filter. Wang discloses a cooling condenser system for processing oily smoke and chemical evaporation in which a filter is between the condenser and exhaust opening (abstract, lines 9-10). It would have been obvious at the time of invention to one of ordinary skill in the art to modify Anderson's invention with the filter of Wang because a filter in that position would "prevent the environment from being polluted" (col. 1, lines 10-11).

Claims 15, 16, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 1 above, and in further view of Miller.

With regards to claim 15, Anderson does not teach of a receptacle including an inlet with a movable closing portion. Miller teaches of a receptacle inlet through which condensate flows ("fluid" is read as "condensate", col. 4, lines 8-10) and a receptacle portion that is movable between open and close positions (solenoid valve, col. 10, lines 3-13). It would have been obvious to one of ordinary skill in the art of fluid flow at the time of invention to incorporate

Miller's receptacle inlet and closing portion to Anderson's receptacle since the portion would shut-off and allow fluid introduction through the inlet (col. 4, lines 6-7, 11-12).

With regards to claim 16, Anderson does not teach a removably coupled receptacle. Miller's receptacle includes a coupling that allows connection and disconnection (col. 4, lines 29-43). It would have been obvious at the time of invention to one of ordinary skill in the art to incorporate Miller's coupling to Anderson's receptacle to provide "immediate and positive shut-off of fluid on both the female and plug side of the matable fittings" when disconnected (col. 4, lines 27-28).

With regards to claims 27 and 28, Anderson teaches of means for depositing ink (print carriage, col. 5, line 22), means for condensing vapor to form condensate (col. 6, line 27), and means for storing condensate (cartridge, col. 9, lines 48-52). Anderson does not teach of a receptacle with means for automatically occluding the receptacle's inlet. Miller discloses a storage means, or receptacle (fluid reservoir, col. 13, line 24), that includes an inlet (col. 13, line 44) and a means for automatically occluding the inlet when disconnected from the system (col. 4, lines 23-28). It would have been obvious at the time of invention to one of ordinary skill in the art to incorporate Miller's automatically occluding inlet into the receptacle of Anderson since the occluding inlet would stop the flow of fluid in the conduits (col. 13, lines 47-48).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Miller as applied to claim 27 above, and further in view of Beauchamp. Anderson does not teach a means for heating the deposited ink. Beauchamp discloses a heater 40 for heating deposited ink (col. 2, lines 51-53). At the time of invention, it would have been obvious to a

person of ordinary skill in the art to combine Anderson's invention with Beauchamp's heater to obtain the invention of claim 29. Motivation for doing so, as taught by Beauchamp, is that the heater uses "conduction heating of wet media sheets to dry the sheets and thus remove substantially all of the moisture" (col. 2, lines 23-24).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 1 above, and further in view of Pan et. al. (6908179). Anderson does not teach of a receptacle having a fill indicator. Pan discloses an ink receptacle with a fill indicator 235 (position indicator, col. 5, line 39). It would have been obvious to one of ordinary skill in the art to modify Anderson's invention to include Pan's indicator since it tracks the occupied volume within the receptacle (col. 5, lines 39-41).

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claims 1 and 19 above, and further in view of Anami et. al. (6854843).

With regards to claim 20, Anderson does not teach a media handling system configured to handle a specific size media. Anami discloses a recording apparatus that is configured to print on normal papers, postcards, or envelopes (col. 1, line 58-59) each known to have a minor dimension less than 9 inches. It would have been obvious to one skilled in the art to modify Anderson's invention to include Anami's media handling system, because everyday printing occurs on these types of media.

With regards to claim 21, Anderson does not teach a stacking system for printed upon sheets. Anami's recording apparatus is configured to stack printed upon sheets (col. 1, lines 62-67). It would have been obvious to one skilled in the art to configure Anderson's invention to include Anami's stacking of printed sheets so that discharged media can then be "firmly stacked" (col. 17, lines 36-37).

Claims 30, 31, 34, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp.

With regards to claim 30, Anderson teaches of a method printing ink upon a medium comprising of depositing ink on media (col. 4, lines 41-43), condensing vapor into a condensate (col. 6, lines 31-36), collecting the condensate in a receptacle (an absorbent with physical boundary between the absorbent and the surrounding atmosphere is read as a receptacle, col. 6, lines 52-54), and absorbing condensate into an absorption member within the receptacle (col. 6, lines 52-59). Anderson does not teach heating the deposited ink. Beauchamp discloses a heater 40 (col. 2, line 21). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson's invention by adding Beauchamp's heater. The motivation for doing so, as taught by Beauchamp, is that the heater will remove moisture from the printed image and sheet (col. 2, lines 24-25). Therefore, it would have been obvious to combine Anderson and Beauchamp to obtain the invention in claim 30.

With regards to claim 31, Anderson teaches of a cooling fluid that is carried through a conduit (hollow tube, col. 6, line 29). It is implied in this reference that the conduit is thermally

conductive, and that the conduit surface is a condensing surface since the conduit is acting as condenser 405 (col. 6, lines 27-29).

With regards to claim 34, Anderson teaches that the absorbing member may be replaced with a second absorbing member (col. 9, lines 58-51).

With regards to claim 39, Anderson teaches the step of depositing ink by using a printhead 320 (col. 5, line 27) and an ink source 315 (col. 5, link 27) in which the ink is ejected onto a medium using print nozzles or pins (col. 5, lines 28-30).

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Pagnon. Anderson does not teach a thermoelectric module. Pagnon discloses an ink circuit in which a condenser is used in combination with a thermoelectric module (Peltier effect cell, col. 3, 36-40). A Peltier thermoelectric device consists of a cool portion and a hot portion, in which the cool portion is thermally coupled to a surface, in this case a condenser. At the time of invention, it would have been obvious to one of ordinary skill to combine Pagnon's Peltier effect thermoelectric module with Anderson's invention since a thermoelectric module is widely known to be an inexpensive cooling device.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Berg. Anderson does not teach of evaporating the condensate within the receptacle. Berg discloses a perforated receptacle so that water may evaporate (col. 4, lines 13-15). At the time of invention, it would have been

obvious to a person of ordinary skill in the art to combine Anderson's invention with Berg's perforated receptacle to obtain the invention of claim 33. The motivation for doing so, as taught by Berg, is so water may evaporate from the receptacle (col. 4, lines 13-15).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Miller. Anderson does not teach a replaceable receptacle. Miller discloses a receptacle that allows connection and disconnection (col. 4, lines 29-43), making the receptacle replaceable. At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Anderson's invention with Miller's replaceable receptacle. The motivation for doing so, as taught by Miller, is to "provide a new waste ink receptacle (abstract, lines 8-9).

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Kakeno (4524365). Anderson does not teach a method of sending a receptacle to disposal. Kakeno discloses a disposable container (col. 2, lines 9-10) for collecting waste ink from an inkjet printer (col. 2, lines 15-16). At the time of invention, it would have been obvious to a person of ordinary skill to combine Anderson's invention with Kakeno's disposable receptacle to obtain the invention of claim 36. The motivation for doing so, as taught by Kakeno, is that it frees the operator from maintenance related discharge from the receptacle, thereby enhancing operationability (col. 4, lines 17-20).

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Pan. Anderson does not teach a fill sensor within the receptacle. Pan discloses an ink receptacle with fill sensor (position indicator, col. 5, line 39). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson's invention by adding a sensor within the receptacle. The motivation for doing so, as taught by Pan, is that the indicator tracks the occupied volume within the receptacle (col. 5, lines 39-41).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Beauchamp as applied to claim 30 above, and further in view of Russel (5446487). Anderson teaches of a method in which water and oil vapors are directed along a passageway across a condenser (col. 6, lines 24-27). Anderson does not teach of directing the vapors through a filter. Russel discloses an ink vapor exhaust system in which a filter 83 is employed (col. 15, line 65). At the time of invention, it would have been obvious to one of ordinary skill in the art to combine Anderson's passageways with Russel's filter. The motivation for doing so, as taught by Russel, is because the filter traps solid particulates drawn from the exhaust (col. 15, lines 66-67).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelby Fidler whose telephone number is (571) 272-1812. The examiner can normally be reached M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLF

RENEE LUEBKE
PRIMARY EXAMINER